

Serial No.: 10/601,576

In the Claims:

1. (currently amended) A silicon single crystal wafer for a particle monitor, wherein said wafer is prepared by slicing a silicon single crystal ingot grown by the Czochralski method or slicing the silicon single crystal ingot and cleaning the wafer,

wherein said wafer has a wafer surface formed by said slicing of the silicon single crystal or by said slicing and cleaning, the wafer surface including an area in which crystal originated particles are generated,

wherein a surface density of particles having a particle size of not less than 0.12 μm on the wafer surface is not more than 15 counts/cm², even after repeating a Standard Cleaning -1, which is made using alkaline chemical liquid mainly containing NH₄OH, H₂O₂, and H₂O,the surface density of particles occurring with the wafer being in a non-annealed condition.

2. (original) A silicon single crystal wafer for a particle monitor according to Claim 1, wherein said wafer has an oxygen concentration of not more than 13×10^{17} atoms/cm³ (old ASTM).

3. (currently amended) A silicon single crystal wafer for a particle monitor, wherein said wafer is prepared by slicing a silicon single crystal ingot grown by the Czochralski method,

wherein said wafer has a wafer surface formed by said slicing of the silicon single crystal or by said slicing and cleaning, the wafer surface including an area in which

Serial No.: 10/601,576

crystal originated particles are generated, and further said silicon single crystal ingot has a nitrogen concentration of $1 \times 10^{13} - 1 \times 10^{15}$ atoms/cm³,

wherein a surface density of particles having a particle size of not less than 0.12 µm on the wafer surface is not more than 1 count/cm², even after repeating a Standard Cleaning -1, which is made using alkaline chemical liquid mainly containing NH₄OH, H₂O₂, and H₂O, the surface density of particles occurring with the wafer being in a non-annealed condition.

4. (original) A silicon single crystal wafer for a particle monitor according to Claim 3, wherein said wafer has an oxygen concentration of not more than 13×10^{17} atoms/cm³ (old ASTM).

5. (currently amended) A silicon single crystal wafer for a particle monitor, wherein said wafer is prepared by slicing a silicon single crystal ingot grown by the Czochralski method,

wherein said wafer has a wafer surface formed by said slicing of the silicon single crystal or by said slicing and cleaning, forming of the ingot in said Czochralski method including controlling a time period of passing a temperature range from 1150°C to 1070°C to be within 20 min and controlling a time period of passing a temperature range from 900°C to 800°C to be within 40 min,

wherein a surface density of particles having a particle size of not less than 0.12 µm on the wafer surface is not more than 15 counts/cm², even after repeating a Standard Cleaning -1, which is made using alkaline chemical liquid mainly containing

Serial No.: 10/601,576

NH₄OH, H₂O₂, and H₂O, the surface density of particles occurring with the wafer being in a non-annealed condition.

6. (original) A silicon single crystal wafer for a particle monitor according to Claim 5, wherein said wafer has an oxygen concentration of not more than 13×10^{17} atoms/cm³ (old ASTM).

7. (currently amended) A silicon single crystal wafer for a particle monitor, wherein said wafer is prepared by slicing a silicon single crystal ingot grown by the Czochralski method,

wherein in said Czochralski method, a time period of passing a temperature range from 1150°C to 1070°C is within 20 min and a time period of passing a temperature range from 900°C to 800°C is within 40 min,

wherein said silicon single crystal ingot has a nitrogen concentration of $1 \times 10^{13} - 1 \times 10^{15}$ atoms/cm³,

wherein a surface density of particles having a particle size of not less than 0.12 μm on the wafer surface is not more than 1 count/cm², even after repeating a Standard Cleaning -1, which is made using alkaline chemical liquid mainly containing NH₄OH, H₂O₂, and H₂O, the surface density of particles occurring with the wafer being in a non-annealed condition.

Serial No.: 10/601,576

8. (original) A silicon single crystal wafer for a particle monitor according to Claim 7, wherein said wafer has an oxygen concentration of not more than 13×10^{17} atoms/cm³ (old ASTM).

9. (previously presented) A silicon single crystal wafer for a particle monitor according to Claim 1, wherein, in said Standard Cleaning - 1, a chemical component of a used solution is H₂O₂ : NH₄OH : H₂O = 1 : 1 : 5, the cleaning is repeated six times, and each cleaning is carried out for 10 min.

10. (previously presented) A silicon single crystal wafer for a particle monitor according to Claim 3, wherein, in said Standard Cleaning - 1, a chemical component of a used solution is H₂O₂ : NH₄OH : H₂O = 1 : 1 : 5, the cleaning is repeated six times, and each cleaning is carried out for 10 min.

11. (previously presented) A silicon single crystal wafer for a particle monitor according to Claim 5, wherein, in said Standard Cleaning - 1, a chemical component of a used solution is H₂O₂ : NH₄OH : H₂O = 1 : 1 : 5, the cleaning is repeated six times, and each cleaning is carried out for 10 min.

12. (previously presented) A silicon single crystal wafer for a particle monitor according to Claim 7, wherein, in said Standard Cleaning - 1, a chemical component of a used solution is H₂O₂ : NH₄OH : H₂O = 1 : 1 : 5, the cleaning is repeated six times, and each cleaning is carried out for 10 min.

Serial No.: 10/601,576

13. canceled

14. (previously presented) A silicon single crystal wafer for a particle monitor according to claim 7, wherein said wafer surface is either a sliced wafer surface formed as a result of said slicing of the silicon single crystal or a sliced and cleaned wafer surface formed as a result of said slicing of the silicon single crystal and cleaning thereof.